July 2022
901199-001
Rev 00

TouchTunes

FRU Installation Guide
Replacing Backlight and Video Boards

Purpose

This document explains how to install the Touch Monitor Backlight and Video Board Field Replacement Unit (FRU) kit (P/N 600324-001) for Angelina and Virtuo Touch Monitors (P/N 301020-001 and 300955-001/002).

Audience

- TouchTunes jukebox operators
- TouchTunes Field Service and Customer Support
- TouchTunes Sales personnel

This document includes tasks of the following type:

☐	Software
☑	Hardware
☐	Mechanical

Estimated Time

15 minutes

Required Personnel

1 technician

Topics

- Required Tools and Equipment
- Important Safety Information
- Included in the Kit
- Installing the Replacement Backlight and Video Boards
- Contacting Technical Support

Required Tools and Equipment

- Cross-head #1 screwdriver
- Precision flat blade screwdriver or similar tool
- Anti-static wrist band (recommended)
- 3/16 inch or 5mm socket wrench
- Label printed with “VID” (Service centers only)

Important Safety Information

WARNING: When performing this procedure or any other maintenance on your jukebox, the unit must be powered off.

To prevent damage to your replacement control board, it is important to prevent its exposure to static discharge during installation.

TouchTunes strongly recommends the following guidelines for performing this procedure:

- Wear a grounded (to a metal part of the Juke chassis) anti-static wrist strap -OR- work with one hand always touching a grounded, unpainted metal surface inside the Angelina jukebox.
- Whenever possible, leave the replacement boards in their anti-static bags until ready to be installed.
- Leave the jukebox plugged into a properly-grounded AC outlet with the power switch turned OFF. Doing so places a ground on the metal chassis.

Included in the Kit

Ensure that you have received all the required parts before proceeding with this installation.

Part	Quantity	TouchTunes Part #
SUB,BACKLIGHT,CUSTOM TT	1	300957-002
SUB,VIDEO BOARD,CUSTOM TT	1	300964-002
FAS,SCR,X-PAN,SEMS,M3X6,ZN	6	200245-006
MAN,FRU,VID BOARD,BKL,ANG,VIR (this document)	1	901199-001

NOTE	For warranty returns, place the defective unit into the packaging and container from which you remove the replacement unit. You must obtain a valid Return Authorization (RA) number from TouchTunes before shipping a defective unit back to TouchTunes.

Installing the Replacement Backlight and Video Boards

1. Press the **MNGR** button on the I/O Board to open the Operator interface main menu.
2. On the Angelina screen, press the **REBOOT** button.
3. When you hear the BIOS beep, power down Angelina by setting the rocker switch on the Power Supply Unit (PSU) to the OFF (**O**) position.

WARNING: Never shut down or unplug the Juke without first performing a reboot and waiting for the BIOS beep. Doing so can cause damage to the hard drive and make it unusable.

NOTE	Both the backlight and video control boards must be replaced. Replacing only one of the two boards will not address the issue and will result in repeated failures. Please replace both boards.

4. Remove the four screws that secure the metal panel to the monitor and set them aside. The locations of the screws are circled in red in the following figure.

Figure 1: Location of screws securing the metal panel

5. Remove the metal panel from the monitor.

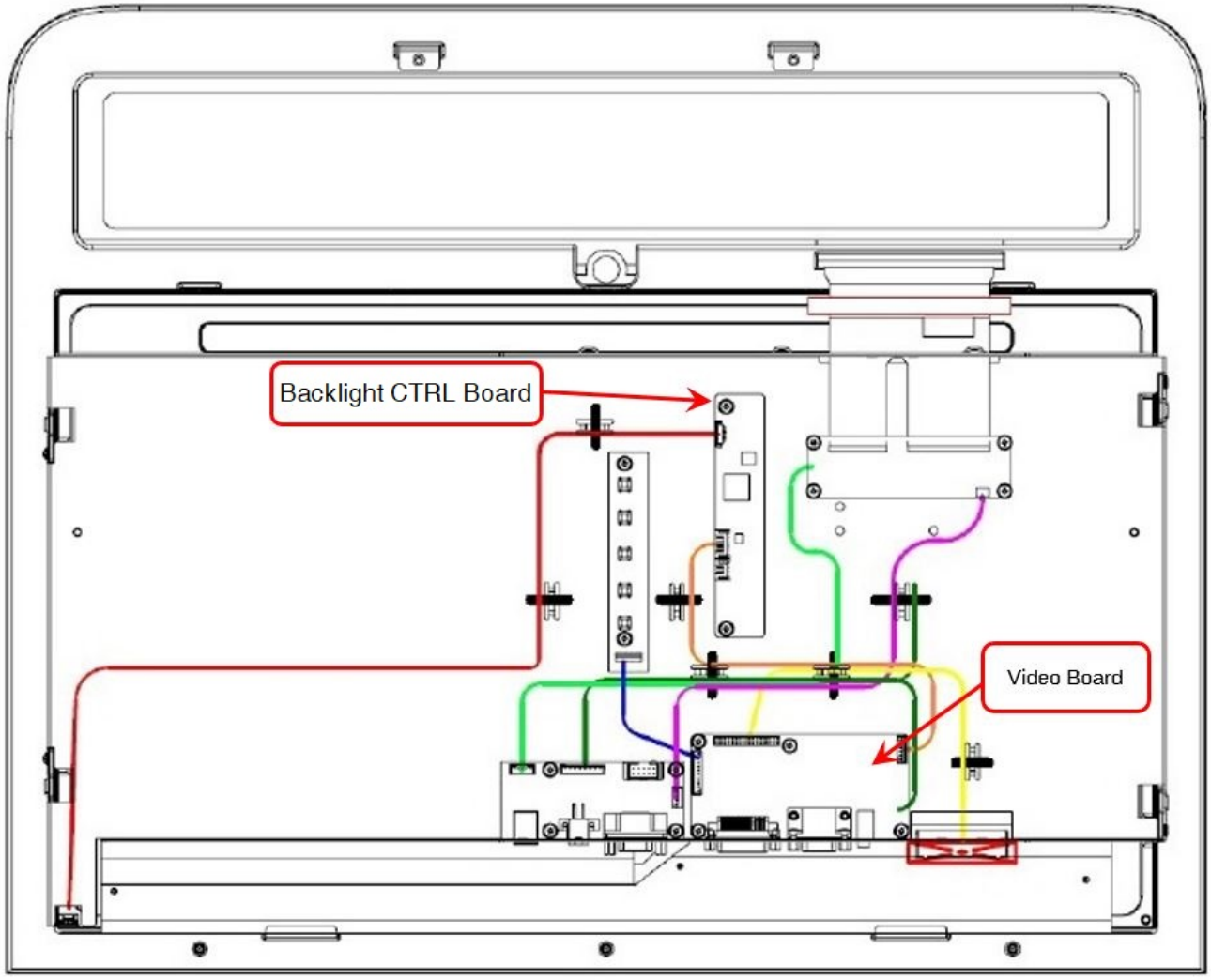


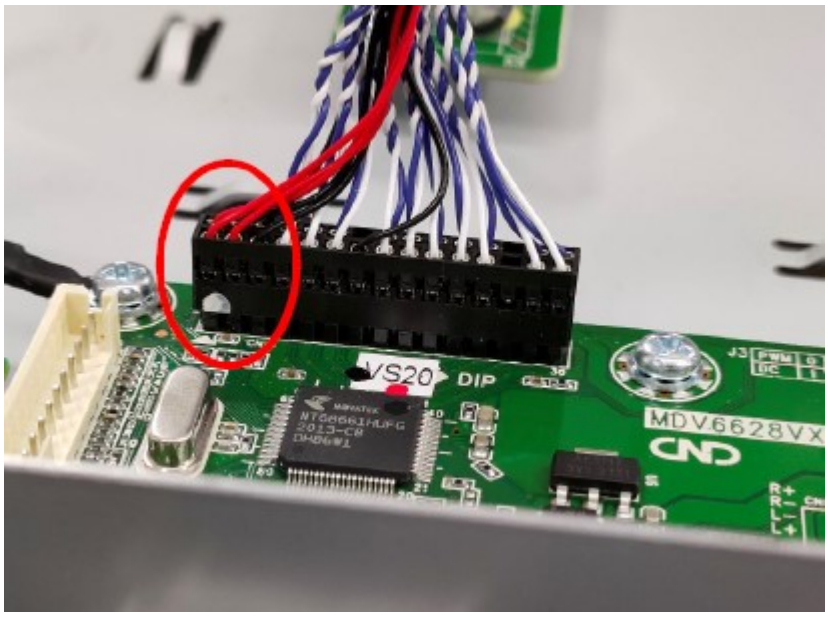
Figure 2: Touchscreen monitor wiring

NOTE	Angelina PCAP Touch Monitor shown above. All applicable Angelina / Virtuo Touch Monitors (P/N 301020-001/002 and 300955-001/002) have the same layout and the same following board replacement steps apply. The colors of the wires and cables in the previous figure are for example purposes only and do not represent the actual colors.

6. Disconnect the backlight cable and video CTRL cables from the backlight control board (indicated in red and orange in the figure 2).
7. Remove the 2 screws that hold the backlight control board in place on the metal bracket.
8. Remove and discard the backlight control board.
9. Remove the replacement backlight control board from its Electrostatic Discharge (ESD) bag and place it on the metal bracket.
10. Fasten the control board to the bracket using two of the screws provided in your kit
11. Reattach the two cables disconnected in step 6.

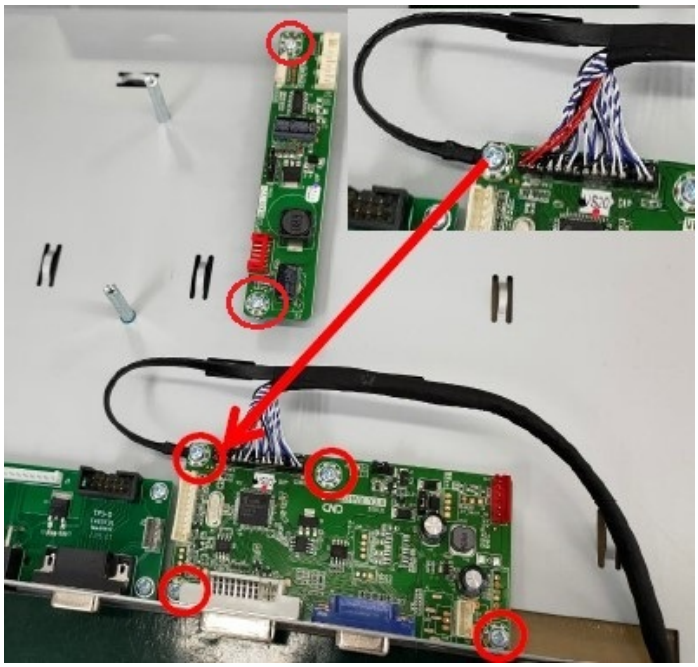
12. Backlight control board has been replaced
13. Disconnect the OSD cable, LVDS cable, and video CTRL cable from the video control board (indicated in blue, yellow, and orange in figure 2).
14. Remove the 4 screws that hold the video control board in place on the metal bracket.
15. Remove the 4 standoffs on the DVI and VGA connectors found at the bottom side of the board.
16. Remove and discard the video control board.
17. Remove the replacement video control board from its Electrostatic Discharge (ESD) bag.
18. Remove the 4 pre-installed standoffs on the DVI and VGA connectors found at the bottom side of the board. Keep these standoffs aside as they will be reinstalled once the board is fastened to the metal bracket.
19. Place the board on the metal bracket.
20. Fasten the video control board to the bracket using the remaining 4 screws provided in your kit.
21. Fasten the 4 standoffs previously removed in step 16 to the board.
22. Reattach the three cables disconnected in step 11.

NOTE	The OSD cable shall be re-connected to the video board as seen in the figure below. The white marking on the connector shall align with the white arrow on the board.

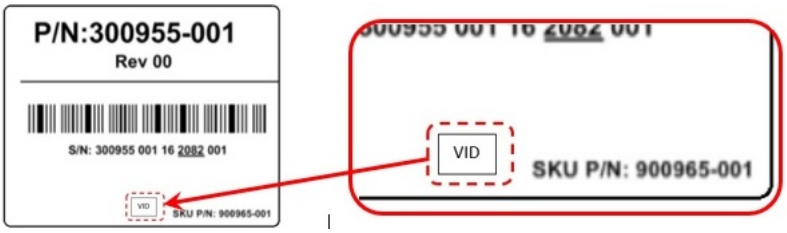


23. Video control board has been replaced.

NOTE	Ensure to re-attach the ground cable (indicated in dark green in figure 2) to the top left screw on the video board as seen in the figure below.



24. Replace the metal panel on the monitor and secure it in place using the four screws removed in step 4.
25. Power on the Juke.
26. Calibrate the touchscreen.
27. SERVICE CENTERS ONLY: Apply a label printed with “VID” to the product ID label on the rear of the touch monitor to identify replacement of the backlight and video boards as seen in the figure below.



28. Verify that both the display and touchscreen functionalities work properly.

You have now completed the replacement of the backlight and video control boards

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Contacting Technical Support

If you need help or have questions about this guide, call the TouchTunes 24/7 Service Hotline at 888-338-5853.

To help us assist you more effectively with problem reports, the following information may be required when contacting TouchTunes support:

- Jukebox model and ID
- Operator ID
- Serial number of the component you believe to be defective
- Date/time of the problem
- Actions performed immediately before the problem occurred
- Any additional comments relevant to the problem

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